

ENLARGEMENT OF DELISSEA (LOBELIACEAE)

HAWAIIAN PLANT STUDIES 138

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In the accompanying article by St. John and Takeuchi, the result of their field and herbarium studies, with abundant fresh material, establishes that most of the usual generic distinctions between Cyanea and Delissea either do not exist or are variable and useless. The only remaining character is whether the surface of the seed coat is smooth or ridged. In habit and floral details the two are identical. The slight difference in the surface of the seed coat is now judged to be so meager as to be insufficient for a generic distinction.

Until recently the dates of publication of the plates in the Atlas of Gaudichaud's Voyage of the Uranie (1826-1830) were known only as in that span of years. St. John (1985) reported finding Livraisons 1, 5, and 12 with their original wrappers. These each had a date and a printed table of contents listing the ten or eleven plates contained, with the plate numbers and binomials. The plates were not consecutively numbered. For instance, in Livraison 1, the plate numbers were between 14 and 117. One of these, plate 78, was of Delissea undulata, and it showed floral details. Hence, this was a valid publication of the genus Delissea and the species undulata, on Oct. 25, 1826. Two other species were added in the text, published in 1929. Also in 1829 was published the genus Cyanea, but now there are no adequate distinctions to separate Cyanea from Delissea which has priority. Consequently the necessary transfers to Delissea are proposed below.

NEW COMBINATIONS

Delissea aculeatiflora (Rock) comb. nov.

Cyanea aculeatiflora Rock, Indig. Trees Haw. Is.

509, 1913; Mem. Bernice Pauahi Bishop Mus. 7(2): 187-184, pl. 98, 1919.

Delissea acuminata Gaud., var. and forma acuminata;

Bot. Voy Uranie 457, 1829.

Lobelia acuminata (Gaud.) Endl., Ann. Wien Mus. Naturgesch. 1: 170, 1826.

Cyanea acuminata (Gaud.) Hillebr., Fl. Haw. Is. 254, 1888; Rock, Mem. Bernice Pauahi Bishop Mus. 7(2):

269, pl. 152, 1919.

Forma latifolia (Wawra) comb. nov.

Cyanea acuminata (Gaud.) Hillebr., var. acuminata,

form latifolia (Wawra) E. Wimm., Engler's Pflanzenr.

IV 276b: 73, 1956.

- D. acuminata Gaud., var. latifolia Wawra, Flora 56: 7, 1873,
var. calycina (Hosaka in Hosaka & Deg.) comb. nov.
Cyanea acuminata (Gaud.) Hillebr., var. calycina Hosaka
in Hosaka & Deg., Occas. Papers Bernice Pauahi Bishop
Mus. 14: 29, fig. 2a, 1938.
- Delissea angustifolia (Cham.) Presl, var. angustifolia,
Monogr. Lobel. 47. ;836.
Lobelia angustifolia Cham., Linnaea 8: 219, 1833.
Delissea acuminata Gaud., var. angustifolia (Cham.) A. Gray,
Proc. Am. Acad. Arts 5: 148, 1862.
Cyanea angustifolia (Cham.) Hillebr., Fl. Haw. Is. 253,
1888.
var. Hillebrandii (Rock in Skottsb.) comb. nov.
Cyanea angustifolia (Cham.) Hillebr., var. Hillebrandii
Rock in Skottsb., Acta Horti Gothob. 2: 265, 1926.
var. Isabella (E. Wimm.) comb. nov.
Cyanea angustifolia (Cham.) Hillebr., var. Isabella
E. Wimm., Engler's Pflanzenfam. 276c: 84, 1968.
var. lanaiensis (Rock) comb. nov.
Cyanea angustifolia (Cham.) Hillebr., var. lanaiensis
Rock, Bull. Torr. Bot. Club 44: 235, 1917; Mem. Bernice
Pauahi Bishop Mus. 7(2): 199, pl. 103, 1919.
forma lanaiensis.
forma elliptica (Rock) comb. nov.
Cyanea angustifolia (Cham.) Hillebr., forma elliptica Rock,
Occas. Papers Bernice Pauahi Bishop Mus. 22: 64, 1957.
C. angustifolia (Cham.) Hillebr., var. elliptica (Rock)
E. Wimm., Engler's Pflanzenr. IV 276c: 821, 1968.
- var. racemosa (Hillebr.) comb. nov.
Cyanea angustifolia (Cham.) Hillebr., var. racemosa
Hillebr., Fl. Haw. Is. 253, 1888.
var. tomentella (Hillebr.) comb. nov.
Cyanea angustifolia (Cham.) Hillebr., var. tomentella
Hillebr., Fl. Haw. Is. 253, 1888; Rock. Mem. Bernice
Pauahi Bishop Mus. 7(2): 203, pl. 106, 1919.
forma subpubescens (E. Wimm.) comb. nov.
Cyanea angustifolia (Cham.) Hillebr., var. tomentella
Hillebr., forma subpubescens E. Wimm., Engler's Pflan-
zenr. IV 276b: 71, 1958.
- Delissea arborea H. Mann, Proc. Am. Acad. Arts 7: 180,
1867.
Cyanea arborea (H. Mann) Hillebr., Fl. Haw. Is. 261,
1888; Rock, Mem. Bernice Pauahi Bishop Mus. 7(2):
165, pl. 83, 86, 1919.
- Delissea argutidentata (E. Wimm.) St. John, Pacif. Sci.
13: 181, 1959.
Cyanea undulata Gaud., var. argutidentata (E. Wimm.) E.
Wimm., Engler's Pflanzenr. IV 276c: Suppl. 817, 1968.
Cyanea argutidentata E. Wimm., Engler's Pflanzenr. IV
276b (1): 75, fig. 21, 1943.

- Delissea asarifolia* (St. John) comb. nov.
Cyanea asarifolia St. John, Bot. Mag. Tokyo 88: 61, 63-64, fig. 2, 1975.
- Delissea asplenifolia* H. Mann, Proc. Am. Acad. Arts 7: 182, 1867.
Cyanea asplenifolia (H. Mann) Hillebr., Fl. Haw. Is. 260 1888; Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 267, pl. 150, 1919.
- Delissea atra* (Hillebr.) comb. nov.
Cyanea atra Hillebr., Fl. Haw. Is. 263, 1888; Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 177, pl. 90, 1919.
 var. *lobata* (Rock) comb. nov.
Cyanea atra Hillebr., var. *lobata* Rock, Ind. Trees Haw. Is. 511, 1913; Mem. Bernice Pauahi Bishop Mus. 7(2): 178, pl. 91, 1919.
- Delissea Baldwinii* (Forbes & Munro) comb. nov.
Cyanea Baldwinii Forbes & Munro, Occas. Papers Bernice Pauahi Bishop Mus. 7: 43, pl. XII, 1920.
- Delissea bicolor* (St. John) comb. nov.
Cyanea bicolor St. John, Pacif. Sci. 25: 63-65, fig. 12, 1971.
- Delissea Bishopii* (Rock) comb. nov.
Cyanea Bishopii Rock, Indig. Trees Haw. Is. 509, 1913; Bull. Torr. Bot. Club 44: 233, pl. 13, 14, 1917; Mem. Bernice Pauahi Bishop Mus. 7(2): 277, pl. 155, 1919.
- Delissea Bondiana* (Rock) comb. nov.
Cyanea pilosa A. Gray, var. *Bondiana* Rock, Indig. Trees Haw. Is. 508, 1913; Mem. Bernice Pauahi Bishop Mus. 7(2): 275, 1919.
Cyanea Bondiana (Rock) Rock, Occas. Papers Bernice Pauahi Bishop Mus. 23: 72, 1962.
- Delissea Bryanii* (Rock) comb. nov.
Cyanea Bryanii Rock, Occas. Papers Bernice Pauahi Bishop Mus. 22: 47-50, figs. 5-6, 1957.
- Delissea Carlsonii* (Rock) comb. nov.
Cyanea Carlsonii Rock, Occas. Papers Bernice Pauahi Bishop Mus. 22: 60, 62-63, fig. 14, 1957; 23: 70, fig. 3, 1962.
- Delissea Chockii* (Rock) comb. nov.
Cyanea Chockii Occas. Papers Bernice Pauahi Bishop Mus. 22: 58-60, 1957.
- Delissea comata* (Hillebr.) comb. nov.
Cyanea comata Hillebr., Fl. Haw. Is. 256, 1919; Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 211, pl. 113, 1919.
- Delissea Copelandii* (Rock) comb. nov.
Cyanea Copelandii Rock, Bull. Torr. Bot. Club 44: 231, pl. 10, 1917; Mem. Bernice Pauahi Bishop Mus. 7(2): 279, pl. 156, 1919.
- Delissea coriacea* A. Gray, var. *coriacea*, Proc. Ann. Acad. Arts 5: 147, 1862.

- Cyanea coriacea (A. Gray) Hillebr., Fl. Haw. Is. 254, 1888; Rock, Bernice Pauahi Bishop Mus. 7(2): 207, pl. 104, 1919.
var. Degeneriana (E. Wimm.) comb. nov.
Cyanea coriacea (A. Gray) Hillebr., var. Degeneriana E. Wimm., Engler's Pflanzenr. IV 276b: 761, 1953.
var. gratiosa (E. Wimm.) comb. nov.
Cyanea coriacea (A. Gray) Hillebr., f. gratiosa E. Wimm., Engler's Pflanzenr. IV 276b: 760, 1953.
var. Hardyi (Rock) comb. nov.
Cyanea Hardyi Rock, Bull. Torr. Bot. Club 44: 236, 1917; Mem. Bernice Pauahi Bishop Mus. 7(2): 209, pl. 111, 1919.
Cyanea coriacea (A. Gray) Hillebr., var. Hardyi (Rock) E. Wimm., Engler's Pflanzenr. IV 276b: 761, 1953.
var. serratifolia (Rock) comb. nov.
Cyanea coriacea (A. Gray) Hillebr., var. serratifolia Rock, Occas. Papers Bernice Pauahi Bishop Mus. 22: 65, 1957.
- Delissea coronata (E. Wimm.) comb. nov.
Cyanea coronata E. Wimm., Engler's Pflanzenr. IV 276b: 59, 1956.
- Delissea crispihirta (E. Wimm.) comb. nov.
Cyanea crispohirta E. Wimm., Engler's Pflanzenr. IV 276c: 823, 1968.
- Delissea Degeneriana (E. Wimm.) comb. nov.
Cyanea Degeneriana E. Wimm., Engler's Pflanzenr. IV 276b: 69-70, fig. 18c, 1957.
- Delissea densiflora (Rock) comb. nov.
Cyanea pilosa A. Gray, var. densiflora Rock, Indig. Trees Haw. Is. 508, 1913; Mem. Bernice Pauahi Bishop Mus. 7(2): 273, pl. 154, 1919.
C. densiflora (Rock) Rock, Occas. Papers Bernice Pauahi Bishop Mus. 23: 72, 74, fig. 4, 1962.
- Delissea dentata (E. Wimm.) comb. nov.
Cyanea dentata E. Wimm., Engler's Pflanzenr. IV 276c: 821-822, fig. 6, 1968.
- Delissea Dunbariae (Rock.) comb. nov.
Cyanea Dunbarii Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 265, 267, 1919.
- Delissea fallax Hillebr., Fl. Haw. Is. 251, 1888; Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 359, pl. 204, 1919.
- Delissea Fernaldii (Rock) comb. nov.
Cyanea Fernaldii Rock, Bull. Torr. Bot. Club 44: 231, pl. 1917.
- Delissea ferox (Hillebr.) comb. nov.
Cyanea ferox Hillebr., Fl. Haw. Is. 259, 1888; Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 239, pl. 131, 1919.
var. laevicalyx (Skottsb.) comb. nov.
Cyanea ferox Hillebr., var. laevicalyx Skottsb. Acta Horti Gothob. 15: 487, 1944.

Delissea fissa H. Mann, Proc. Am. Acad. Arts 7: 182, 1867.
Cyanea fissa (H. Mann) Hillebr., Fl. Haw. Is. 255, 1888;
Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 225, pl.
120, 121, 1919.

Delissea floribunda (E. Wimm.) comb. nov.

Cyanea floribunda E. Wimm., Engler's Pflanzenr. IV 276b:
761, 1953.

Delissea Forbesii stat. et nom. nov.

Cuanea undulata Forbes, Occas. Papers Bernice Pauahi Bi-
shop Mus. 5(1): 12-13, one plate, 1912, non *D. undulata*
Gaud., 1826.

Delissea Gayana (Rock) comb. nov.

Cyanea Gayana Rock, Indig. Trees Haw. Is. 510, 1913;
Mem. Bernice Pauahi Bishop Mus. 7(2): 225, 1919.

var. *Duvelii* (Rock) comb. nov.

Cyanea Gayana Rock, var. *Duvelii* Rock, Occas. Papers
Bernice Pauahi Bishop Mus. 22: 50-52, fig. 7, 1957.

var. *wainihaensis* (Rock) comb. nov.

Cyanea Gayana Rock, var. *wainihaensis* Rock, Occas. Papers
Bernice Pauahi Bishop Mus. 22: 56, fig. 11, 1957.

Delissea Gibsonii (Hillebr.) comb. nov.

Cyanea Gibsonii Hillebr., Fl. Haw. Is. 263, 1888; Rock,
Mem. Bernice Pauahi Bishop Mus. 7(2): 77, pl. 89, 1919.

Delissea Giffardii (Rock) comb. nov.

Cyanea Giffardii Rock, Bull. Torr. Bot. Club 45: 132-135,
1918; Mem. Bernice Pauahi Bishop Mus. 7(2): 159, pl.
79, 80, 1919.

Delissea glabra (E. Wimm.) comb. nov.

Cyanea Knudsenii Rock, var. *glabra* E. Wimm., Engler's
Pflanzenr. IV 276b: 75, 1956.

C. glabra E. Wimm.) St. John, Phytologia 48: 143-144,
fig. 1, 1981.

Delissea Grimesiana (Gaud.) comb. nov. var. *Grimesiana*.

Cyanea Grimesiana Gaud., var. *Grimesiana*, Bot. Voy.

Uranie 457, 1829; Atlas tab. 75, 1826-30; Rock. Mem.

Bernice Pauahi Bishop Mus. 7(2): 247, pl. 137, 138, 1919.

var. *Obatae* (St. John) comb. nov.

Cyanea Grimesiana Gaud., var. *Obatae* St. John, Phytologia
40: 97, 1978.

var. *cylindrocalyx* (Rock) comb. nov.

Cyanea Grimesiana Gaud., var. *cylindrocalyx* Rock, Bull.

Torr. Bot. Club 44: 235, pl. 16, 1917; Mem. Bernice Pauahi
Bishop Mus. 7(2): 251, 1919

var. *hirsutifolia* (Rock) comb. nov.

Cyanea Grimesiana Gaud., var. *hirsutifolia* Rock, Occas.

Papers Bernice Pauahi Bishop Mus. 22: 53, 1957.

var. *Lydgadei* (Rock) comb. nov.

Cyanea-Grimesiana Gaud., var. *Lydgatei* Rock, Mem. Bernice
Pauahi Bishop Mus. 7(2): 251, 1919

- var. mauiensis (Rock) comb. nov.
Cyanea Grimesiana Gaud., var. mauiensis Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 251, 1919.
- var. Munroi (Hosaka in Hosaka & Deg.) comb. nov.
Cyanea Grimesiana Gaud., var. Munroi Hosaka in Hosaka & Deg., Occas Papers Bernice Pauahi Bishop Mus, 14: 30, 1938.
- Delissea haleakalaensis (St. John) comb. nov.
Cyanea haleakalaensis St. John, Pacif. Sci 25: 65-67. fig. 13, 1976.
- Delissea hamatiflora (Rock) comb. nov.
Cyanea hamatiflora Rock, Indig Trees Haw. Is. 510, 1913; Mem. Bernice Pauahi Bishop Mus 7(2): 187, pl. 96. 97. 1919.
- Delissea hirtella H. Mann, var. hirtella, Proc. Am. Acad. Arts 7: 179, 1867.
Cyanea hirtella (H. Mann) Hillebr., Fl. Haw. Is. 255, 1888; Rock (in part), Mem. Bernice Pauahi Bishop Mus. 7(2): 219, 1919.
- var. striata (E. Wimm.) comb. nov.
Cyanea hirtella (H. Mann) Hillebr., var. striata E. Wimm., Engler's Pflanzenr. IV: 276c: 824, 1968,
var subglabra (E. Wimm.) comb. nov.
Cyanea hirtella (H Mann) Hillebr., var. subglabra E. Wimm. Engler's Pflanzenr. IV 276c: 829, 1968.
- Delissea holophylla (Hillebr.) comb. nov., var holophylla
Cyanea holophylla Hillebr., Fl. Haw. Is. 257. 1888; Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 259, pl. 146 1919.
- var. obovata (Rock) comb. nov.
Cyanea holophylla Hillebr., var obovata Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 263, 1919.
- Delissea horrida (Rock) comb. nov.
Cyanea ferox Hillebr., var, horrida Rock, Bull. Torr. Bot. Club 44: 235, 1917; Mem. Bernice Pauahi Bishop Mus. 7(2): 245m 1919.
- Delissea Knudsenii (Rock) comb nov. var, Knudsenii.
Cyanea Knudsenii Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 213, pl. 114, 1919.
- Delissea konaensis St. John, Phytologia 59: 515-516, fig. 1, 1986.
- Delissea laciniata Hillebr., var. laciniata, Fl. Haw. Is. 349, 1888.
var. parvifolia Rock, Mem. Bernice Pauahi Bishop Mus 7(2): 349, 1919.
- Delissea Larrisonii (Rock) comb. nov.
Cyanea Larrisonii Rock, Bull Torr. Bot. Club 42: 77. pl. VIII, 1915.
- Delissea leptostegia (A. Gray) comb. nov. var, leptostegia.
Cyanea leptostegia A. Gray, Proc. Amm Acad Arts 5:

- 149, 1862 Rock, Mem. Bernice Pauahi Bishop Mus 7(2); 165, pl. 81, 82, 1919.
 var. *velutina* (Skottsb.) comb. nov.
Cyanea leptostgia A. Gray, var. *velutina* Skottsb., *Acta Horti Gothob.* 2: 204, 1926.
- Delissea linearifolia* (Rock) comb. nov.
Cyanea linearifolia Rock, Occas. Papers Bernice Pauahi Bishop Mus. 22: 60, Fig. 13, 1957.
- Delissea lobata* (H. Mann) comb. nov. var. *lobata*.
Cyanea lobata H. Mann, Proc. Am. Acad. Arts 7: 186, 1867; Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 247, pl. 136, 1919.
 var. *hamakuae* (Rock) comb. nov.
Cyanea lobata H. Mann, var. *hamakuae* Rock, Mem. Bernice Pauahi Bishop Mus. 7(2) 247, 1919.
- Delissea longipedunculata* (Rock) comb. nov.
Cyanea longipedunculata Rock, Occas. Papers Bernice Pauahi Bishop Mus. 22: 54-56, figs. 9, 10, 1957.
- Delissea longissima* (Rock) comb. nov.
Cyanea scabra Hillebr., var. *longissima* Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 259, pl. 144, 1919; *C. longissima* (Rock) St. John, *Phytologia* 40: 98, 1978.
- Delissea Mceldownei* (Rock) comb. nov.
Cyanea Mceldownei Rock, Occas. Papers Bernice Pauahi Bishop Mus. 22: 43-44, 1957.
- Delissea macrostegia* (Hillebr.) comb. nov. var. *macrostegia*.
Cyanea macrostegia Hillebr., Fl. Haw. Is. 263, 1888; Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 179, pl. 92, 93, 1919.
 var. *parvibracteata* (Rock) comb. nov.
Cyanea macrostegia Hillebr., var. *parvibracteata* Rock, Mem. Bernice Pauahi Bishop Mus., 7(2): 183, pl. 95, 1919.
 var. *viscosa* (Rock) comb. nov.
Cyanea macrostegia Hillebr., var. *viscosa* Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 183, pl. 94, 1919.
- Delissea magnifica* (E. Wimm.) comb. nov.
Cyanea magnifica E. Wimm., Engler's Pflanzenr. IV 276c: 817, 1968.
- Delissea Mannii* Brigham in H. Mann, Proc. Am. Acad. Arts 7: 182, 1867.
Cyanea Mannii (Brigham in H. Mann) Hillebr., Fl. Haw. Is. 253, 1888; Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 203, pl. 107, 1919.
- Delissea Mariana* (E. Wimm.) comb. nov.
Cyanea Mariana E. Wimm., Engler's Pflanzenr. IV, 276b, 57, 1956.
- Delissea Marksii* (Rock) comb. nov.
Cyanea Marksii Rock, Occas. Papers Bernice Pauahi

- Bishop Mus., 22: 52-54, fig. 8, 1957.
Delissea megacarpa (Rock) comb. nov.
Cyanea pilosa A. Gray, var. *megacarpa* Rock, Indig Trees Haw. Is. 508, 1913; Mem Bernice Pauahi Bishop Mus. 7(2); 275, 1919.
C. megacarpa (Rock) Rock, Occas. Papers Bernice Pauahi Bishop Mus. 23: 73, 75, fig. 5, 1962.
Delissea membranacea (Rock) comb. nov.
Cyanea membranacea Rock, Occas Papers Bernice Pauahi Bishop Mus. 22: 63, 1957.
Delissea multispicata (H. Levl) comb. nov.
Cyanea multispicata H. Lévl. Fedde Spec. Nov. Regn. Veg. 10: 10-11, 1911; Rock, Mem Bernice Pauahi Bishop Mus. 7(2): 269, pl. 151, 1919.
Delissea Nelsonii (St. John) comb. nov.
Cyanea Nelsonii St. John, Pacif. Sci. 30: 37-40, fig. 18, 1976.
Delissea noli-me-tangere (Rock) comb. nov.
Cyanea noli-me-tangere Rock, Bull. Torr. Bot. Club 44: 229, p. 9, 1917; Mem. Bernice Pauahi Bishop Mus. 7(2): 231, pl. 126, 1919.
Delissea obtusa A. Gray, Proc. Am. Acad. Arts 5: 254, 1862.
Delissea occultans (St. John) comb. nov.
Cyanea occultans St. John, Phytologia 48: 143-144, fig. 1, 1981
Delissea ovatisepala (E. Wimm.) comb. nov.
Cyanea ovatisepala E. Wimm., Engler's Pflanzenr. IV 276b; 57-58, fig. 19b, 1956.
Delissea palakea (C. N. Forbes) comb. nov.
Cyanea palakea C. N. Forbes, Occas. Papers Bernice Pauahi Bishop Mus. 6(3): 72-73, one fig. 1916.
Delissea parviflora Hillebr., Fl. Haw. Is. 251, 1888; Rock, Mem. Bernice Pauahi Bishop Mus. 7(2) 359, pl. 205, 1919.
Delissea pilosa (A. Gray) H. Mann, Proc. Am. Acad. Arts 7: 182, 1867
Cyanea pilosa A. Gray, Proc. Am. Acad. Arts 5: 149, 1862; Rock, Mem. Bernice Pauahi Bishop Mus 7(2): 271, pl. 153, 1919.
Delissea pinnatifida (Cham.) Presl, Prodr. Lobel 47, 1836.
Lobelia pinnatifida Cham., Linnaea 8: 200, 1833.
Rollandia pinnatifida (Cham.) G. Don, Gen. Syst. 3: 698, 1834.
Cyanea pinnatifida (Cham.) E. Wimm., Engler's Pflanzenr. IV 276b: 63, 1956.
Delissea platyphylla A. Gray, Proc. Am. Acad Arts 5: 148, 1862.
Cyanea platyphylla (A. Gray) Hillebr., Fl. Haw. Is; 264, 1888; Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 233, 235, pl. 127, 1919.

Delissea procera (Hillebr.) comb. nov.

Cyanea procera Hillebr., Fl. Haw. Is. 262, 1888; Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 173, pl. 88, 1919.

Delissea profuga (C. N. Forbes) comb. nov.

Cyanea profuga C. N. Forbes, Occas. Papers Bernice Pauahi Bishop Mus. 6(3): 70, one plate, 1916; Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 237, pl. 129, 1919.

Delissea pulchra (Rock) comb. nov.

Cyanea pulchra Rock, Occas. Papers Bernice Pauahi Bishop Mus. 22: 58, fig. 12, 1957.

Delissea pycnocarpa Hillebr.) comb. nov.

Cyanea pycnocarpa Hillebr., E. Wimm., Engler's Pflanzenr. IV 276b: 53, fig. 18a, 1956.

D. arborea (H. Mann) Hillebr., var. *pycnocarpa* Hillebr., Fl. Haw. Is. 261, 1888; Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 168, 1919.

Delissea quercifolia (Hillebr.) comb. nov., var. *quercifolia*

Cyanea solanacea Hillebr., var. *quercifolia* Hillebr. Fl. Haw. Is. 259, 1888; Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 265, pl. 149, 1919.

C. quercifolia (Hillebr.) E. Wimm., Engler's Pflanzenr. IV 276b: 64, 1958.

var. *atropurpurea* (E. Wimm.) comb. nov.

Cyanea quercifolia (Hillebr.) E. Wimm., var. *atropurpurea* E. Wimm., Engler's Pflanzenr. IV 276b: 64, 1956.

Delissea recta Wawra, Flora 56: 30, 1873.

Cyanea recta (Wawra) Hillebr., Fl. Haw. Is. 255, 1888; Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 227, pl. 123, 1919.

Delissea regina Wawra, Flora 56: 9, 1875.

Cyanea superba (Cham.) A. Gray, var. *reginae* (Wawra) Hillebr., Fl. Haw. Is. 261, 1888.

C. regina (Wawra) Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 159, pl. 77, 78, 1919.

Delissea Remyi (Rock) comb. nov.

Cyanea Remyi Rock, Bull. Torr. Bot. Club 44: 233, pl. 12, 1917; Mem. Bernice Pauahi Bishop Mus. 7(2): 282, pl. 158, 1919.

Delissea rhytidosperma H. Mann, Proc. Am. Acad. Arts 7:

180, 1867; Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 57, pl. 202, 203, 1919.

Delissea rivularis (Rock) E. Wimm., Engler's Pflanzenr. IV 276b: 43, 1956.

Cyanea rivularis Rock, Indig. Trées Haw. Is. 511, 1913; Mem. Bernice Pauahi Bishop Mus. 7(2): 219, pl. 118, 119, 1919;

Delissea Rockii (E. Wimm.) comb. nov.

Cyanea Rockii E. Wimm., Engler's Pflanzenr. IV 276c: 323, fig. 7b, 1968.

Delissea rollandioides (Rock) comb. nov.

Cyanea rollandioides Bull. Torr. Bot. Club 45: 135,

- 1918; Mem. Bernice Pauahi Bishop Mus. 7(2): 237, pl. 130 1919.
- Delissea scabra* (Hillebr.) comb. nov.
Cyanea scabra Hillebr., Fl. Haw. Is. 286, 1888.
var. and forma sinuata (Rock) E. Wimm., Engler's Pflanzennr. IV 276b: 66, 1958.
- C. scabra Hillebr., var. sinuata Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 259, pl. 145, 1919.
- var. variabilis (Rock) comb. nov.
C. scabra Hillebr., var. variabilis Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 255, pl. 143, 1919.
- Delissea Shipmanii* (Rock) comb. nov.
Cyanea Shipmanii Rock, Occas Papers Bernice Pauahi Bishop Mus. 22: 44-47, figs. 3, 4, 1957.
- Delissea sinuata* Hillebr., Fl. Haw. Is. 250, 1888; Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 349, pl. 199, 1919.
var. lanaiensis (Rock) comb. nov.
D. sinuata Hillebr., var. lanaiensis Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 353, pl. 200, 1919.
- Delissea solanacea* (Hillebr.) comb. nov.
Cyanea solanacea Hillebr., Fl. Haw. Is. 259, 1888; Rock Mem Bernice Pauahi Bishop Mus. 7(2): 263, pl. 147, 148, 1919.
- Delissea solenocalyx* (Hillebr.) comb. nov.
Cyanea solenocalyx Hillebr., Fl. Haw. Is. 258, 1888; Rock, Mem. Bernice Pauahi Bishop Mus 7(2): 168, pl. 85, 86, 1919.
Forma glabrata (Rock) Deg., Fl. Haw. fm. 339, fig. 1934.
Cyanea solenocalyx Hillebr., var. glabrata Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 171, 1919.
var. latifolia (E. Wimm.) comb. nov.
Cyanea solenocalyx Hillebr., var. latifolia E. Wimm. Engler's Pflanzennr. IV 276b: 69, 1956.
- Delissea spathulata* (Hillebr.) comb. nov.
Cyanea coriacea Hillebr., var. spathulata Hillebr., Fl. Haw. Is. 254, 1888.
C. spathulata (Hillebr.) A. Heller, Minn. Bot. Stud. 1: 989, pl. 65, 1897.
- Delissea stictophylla* (Rock) comb. nov.
Cyanea stictophylla Rock, Indig. Trees Haw. Is. 509, 1913; Mem. Bernice Pauahi Bishop Mus. 7(2): 279, pl. 157, 1919.
var. inermis (Rock) comb. nov.
Cyanea stictophylla Rock, var. inermis Rock, Occas. Papers Bernice Pauahi Bishop Mus. 22: 63-64, 1957.
- Delissea subcordata* Gaud., Bot. Voy. Uranie 457, 1829; Atlas pl. 77, 1826-30; Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 345, pl. 195, 1919; St. John, Phytologia 37: 417, 1977.
Var. kauaiensis St. John, Phytologia 37: 418, 1977.

- Var. *obtusifolia* Wawra, Flora 56: 7, 1878; Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 349, 1919; St. John, Phytologia 37: 415, 1977.
- var. *waialaeensis* St. John, Phytologia 37: 419, 1977.
- var. *waikaneensis* St. John, Phytologia 37: 419, 1977.
- Delissea submuricata* (E. Wimm.) comb. nov.
- Cyanea submuricata* E. Wimm., Engler's Pflanzenr. IV 276b: 760, 1953.
- Delissea superba* (Cham.) comb. nov.
- Lobelia superba* Linnaea 8: 223, 1833.
- Cyanea superba* (Cham.) A. Gray, Proc. Am. Acad. Arts 5: 149, 1862.
- var. *velutina* (Rock) comb. nov.
- Cyanea superba* (Cham.) A. Gray, var. *velutina* Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 157, pl. 76, 1919.
- Delissea sylvestris* (A. Heller) comb. nov.
- Cyanea sylvestris* A. Heller, Minn. Bot. Stud. 1: 909, 1897.
- var. *eriantha* (Skottsb.) comb. nov.
- Cyanea eriantha* Skottsb., Acta Horti Gothob. 2: 266, 1926.
- C. sylvestris* A. Heller, var. *eriantha* (Skottsb.) E. Wimm., Engler's Pflanzenr. IV 276b: 61, 1956.
- Delissea tritomantha* (A. Gray) comb. nov.
- Cyanea tritomantha* A. Gray, Proc. Am. Acad. Arts 5: 149, 1962; Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 189, pl. 99, 100, 1919.
- var. *Lydgatei* (Rock) comb. nov.
- C. tritomantha* A. Gray, var. *Lydgatei* Rock Mem. Bernice Pauahi Bishop Mus. 7(2): 193, 1919.
- Delissea truncata* (Rock) comb. nov.
- Cyanea truncata* Rock, Bull. Torr. Bot. Club 44: 234, pl. 15, 1917.
- Rollandia truncata* Rock, Bull. Coll. Haw. Publ., 2: 44, 1913.
- var. *Juddii* (C. N. Forbes) comb. nov.
- C. Juddii* C. N. Forbes, Occass. Papers Bernice Pauahi Bishop Mus. 6(3): 68, one plate 1916.
- C. truncata* Rock, var. *Juddii* (C. N. Forbes) St. John, Occas. Papers Bernice Pauahi Bishop Mus. 15(3): 22, pl. 2, 1939.
- Delissea undulata* Gaud. Bot. Voy. Uranie Atlas pl. 78, Oct. 25, 1826; text, p. 457, 1829; Rock, Mem. Bernice Pauahi Bishop Mus. 7(2): 353, pl. 201, 1919; St. John, Taxon 34: 633-634, 1985.
- Delissea wailauensis* (Rock) comb. nov.
- Cyanea wailauensis* Rock, Bull. Coll. Hawaii Publ. 2: 43, 1913; Mem. Bernice Pauahi Bishop Mus. 7(2): 173, pl. 87, 1919.

LITERATURE CITED

- Gaudichaud, Charles, 1826-1830. Voyage autour du monde
entrepris par ordre du Roi, sur les corvettes l'Uranie
et La Physicienne. Botanique 1-522; Atlas 1-22, pl. 1-120.
St. John, Harold, 1985. Earlier Dates of Valid Public-
ation of Some Genera and Species in Gaudichaud's Botany
of the Uranie Voyage. Taxon 34: 663-665.